Registration no: | | | | | | | | | | |

Total Number of Pages: 01 **M.Tech**

MDPC201

2nd Semester Back Examination – 2016-17
BASIC MECHANICAL HANDLING SYSTEMS
BRANCH(S): MACHINE DESIGN, MECH. SYSTEM DESIGN
Time: 3 Hours
Max Marks: 70
Q.CODE:Z476

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** (2 x 10)

a) Name various principles of Material Handling System
b) Classify mechanical handling equipment
c) Describe construction of a winch briefly.
d) Which belt conveyor prevents sliding down of material at an inclination of 55^0 with horizontal?
e) Give any two types of overhead equipment
f) What is the difference between traction and traction less type of conveyors? Give examples
g) Differentiate between unit load and bulk load
h) Differentiate between electric hoist and mechanical hoist
i) What are the economic factors of material handling system?
j) Give list of different types of Hoisting equipment

Q2 a) Define 'material handling'. Explain why material handling is very important in production? (5)
b) Describe various functions of material handling in brief. (5)

Q3 a) Discuss factors affecting the selection of material handling equipment in a production shop. (5)
b) Describe material handling at workplace. How a workplace layout should be planned? (5)

Q4 a) Write note on Roller conveyors (5)
b) Explain pneumatic and hydraulic conveyors in detail (5)

Q5 a) Describe the construction of roller chains and lifting tackles (5)
b) What are the grabbing mechanism for loose load and unit load? (5)

Q6 a) How starting and stopping is achieved in lifting mechanism (5)
b) State the function of turn tables and capstans and explain their working. (5)

Q7 a) Write note on 'Modern trends in material handling'. (5)
b) What are the steps in analyzing material handling problems? (5)
(5)

Q8 a) Describe different types of Hoisting equipment.
b) Explain care and safety in material handling (5)